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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,198	10/12/2000	Koichiro Miyake	1241.16	2149

7590 02/14/2003

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EXAMINER

SAIDHA, TEKCHAND

ART UNIT

PAPER NUMBER

1652

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/673198

Applicant(s)

Miyake et al.

Examiner

T. Saidha

Group Art Unit

1652

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--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 4/23/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-22 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☒ Claim(s) 1-22 are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

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*Lack of Unity of Invention*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

***Process of producing isoprenoid compound***

Group I, claim(s) 1-3 & 9 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 6) encodes an enzyme of SEQ ID NO : 1.

Group II, claim(s) 1 & 9 (In-part) & 4-5, drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 7) encodes an enzyme of SEQ ID NO : 2 [farnesyle pyrophosphate synthase].

Group III, claim(s) 1, 8 & 9 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 8) encodes an enzyme of SEQ ID NO : 3.

Group IV, claim(s) 1, 8 & 9 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 9) encodes an enzyme of SEQ ID NO : 4.

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Group V, claim(s) 1, 6, 7 & 9 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 10) encodes an enzyme of SEQ ID NO : 5.

Group VI, claim(s) 2-3 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 27) encodes an enzyme of SEQ ID NO : 26.

Group VII, claim(s) 2-3 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 29) encodes an enzyme of SEQ ID NO : 28.

Group VIII, claim(s) 6-7 (In-part), drawn to a process of producing isoprenoid compound integrating DNA into a vector, wherein the DNA (SEQ ID NO : 31) encodes an enzyme of SEQ ID NO : 30.

### ***Protein***

Group IX, claim(s) 10 (In-part), drawn to a protein of SEQ ID NO : 3.

Group X, claim(s) 10 (In-part), drawn to a protein of SEQ ID NO : 4.

Group XI, claim(s) 10 (In-part), drawn to a protein of SEQ ID NO : 5.

### ***DNA and method of making the protein***

Group XII, claim(s) 11-13 (In-part), drawn to a DNA (SEQ ID NO : 8) encoding the protein of SEQ ID NO : 3 and recombinant method of making the protein using the DNA.

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Group XIII, claim(s) 11-13 (In-part), drawn to a DNA (SEQ ID NO : 9) encoding the protein of SEQ ID NO : 4 and recombinant method of making the protein using the DNA.

Group XIV, claim(s) 11-13 (In-part), drawn to a DNA (SEQ ID NO : 10) encoding the protein of SEQ ID NO : 5 and recombinant method of making the protein using the DNA.

***Method of Screening for Antibiotic Activity and the compound***

Group XV, claim(s) 14, 16-17, 19 & 21 (In-part), drawn to a method of screening for a compound having antibiotic activity comprising inhibition of enzyme of SEQ ID NO : 1.

Group XVI, claim(s) 14, 19 & 21 (In-part), drawn to a method of screening for a compound having antibiotic activity comprising inhibition of enzyme of SEQ ID NO : 2.

Group XVII, claim(s) 14, 19 & 21 (In-part), drawn to a method of screening for a compound having antibiotic activity comprising inhibition of enzyme of SEQ ID NO : 3.

Group XVIII, claim(s) 14, 19 & 21 (In-part), drawn to a method of screening for a compound having antibiotic activity comprising inhibition of enzyme of SEQ ID NO : 4.

Group XIX, claim(s) 14, 16, 18, 19 & 21 (In-part), drawn to a method of screening for a compound having antibiotic activity comprising inhibition of enzyme of SEQ ID NO : 5.

***Method of Screening for Weeding Activity and the compound***

Group XX, claim(s) 15-17, 20 & 22 (In-part), drawn to a method of screening for a compound having weeding activity comprising inhibition of enzyme of SEQ ID NO : 1.

Group XXI, claim(s) 15, 20 & 22 (In-part), drawn to a method of screening for a compound having weeding activity comprising inhibition of enzyme of SEQ ID NO : 2.

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Group XXII, claim(s) 15, 20 & 22 (In-part), drawn to a method of screening for a compound having weeding activity comprising inhibition of enzyme of SEQ ID NO : 3.

Group XXIII, claim(s) 15, 20 & 22 (In-part), drawn to a method of screening for a compound having weeding activity comprising inhibition of enzyme of SEQ ID NO : 4.

Group XXIV, claim(s) 15-16, 18, 20 & 22 (In-part), drawn to a method of screening for a compound having weeding activity comprising inhibition of enzyme of SEQ ID NO : 5.

LIST OF THE SEQUENCES OF THE DNA AND THE ENCODED PROTEIN

*(for reference only)*

**DNA**

SEQ ID NO : 6  
SEQ ID NO : 7  
SEQ ID NO : 8  
SEQ ID NO : 9  
SEQ ID NO : 10  
SEQ ID NO : 27  
SEQ ID NO : 29  
SEQ ID NO : 31

**PROTEIN**

SEQ ID NO : 1  
SEQ ID NO : 2  
SEQ ID NO : 3  
SEQ ID NO : 4  
SEQ ID NO : 5  
SEQ ID NO : 26  
SEQ ID NO : 28  
SEQ ID NO : 30

2. The inventions listed as Groups I-XXIV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group I has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 1 which Groups II-XXIV do not share; Group II has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 2 which Groups I and III-XXIV do not share; Group III has a special technical feature of a

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process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 3 which Groups I-II & IV-XXIV do not share; Group IV has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 4 which Groups I-III & V-XXIV do not share; Group V has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 5 which Groups I-IV & VI-XXIV do not share; Group VI has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 26 which Groups IV & VII-XXIV do not share; Group VII has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 28 which Groups I-VII & VIII-XXIV do not share; Group VIII has a special technical feature of a process for making isoprenoid compound using a DNA sequence encoding the protein or enzyme of SEQ ID NO : 30 which Groups I-VII & IX-XXIV do not share; Similarly each of the Groups IX-XI has a special technical feature of a protein or enzyme of SEQ ID NO : 3 or 4 or 5 which Groups I-VIII & XII-XXIV do not share, or may be used for making antibodies, for example, a use different than that claimed herein; Similarly each of the Groups XII-XIV has a special technical feature of a DNA of SEQ ID NO : 8 or 9 or 10 which Groups I-XI & XV-XXIV do not share; Similarly each of the methods of Groups XV-XXIV has a special technical feature of a protein or DNA of varying structure and activity as evident by the reaction catalyzed, SEQ ID NO : X and varying method steps employed in screening different

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compounds which Groups I-VIII & XII-XXIV do not share; Thus the various groups discussed show a lack of unity of invention.

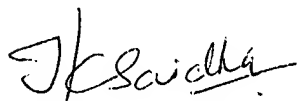
3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventor ship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventor ship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tekchand Saidha (Ph.D.) whose telephone number is (703) 305-6595. The examiner can normally be reached on Monday-Friday from 8:15 am to 4:45 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy, can be reached at (703) 308-3804. The fax phone number for this Group in the Technology Center is (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.



**Tekchand Saidha**  
**Primary Examiner, Art Unit 1652**  
**February 10, 2003**